



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,873	11/26/2003	Makoto Mori	XA-9991	6080
181	7590	05/13/2005		
			EXAMINER	
			NGUYEN, VIET Q	
			ART UNIT	PAPER NUMBER
			2827	

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/721,873	MORI ET AL. 
	Examiner	Art Unit
	Viet Q. Nguyen	2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on Application filed on 11/26/2003.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1 is/are rejected.
- 7) Claim(s) 2-5 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>11/26/2003</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Claims 1-5 are present for examination.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Spencer et al (US 2004/0054847A1)** and **Kumuhara et al (JP02000082122A)**.

Spencer et al (see Fig. 2) clearly shows a memory card (200) interfaced and coupled to a computer host (102) for receiving access commands into one of its plurality of memory banks (202). Page 6 (see paragraph [0051]) of this reference suggests “non-volatile” such as ROM or EPROM, as an alternative for such plurality of memory banks, which could have been obviously used in such arrangement if desired. Fig.2 also shows the use of memory controller (104) for giving access instructions of operation to said plural memory banks on the basis of an external command issued from external host (102, Fig. 2). As further shown in Fig.1, paragraph ([0021]) specifically stated “the memory controller 104 and memory 106 are grouped together on a type of memory card that includes controller functionality and storage capability”. Additionally, paragraph [0040] stated that “the components of storage 100 can be implemented in

hardware, software, **firmware, or a combination thereof**. Thus, it would have been obvious to one skilled in this art that these so-called firmware versions can be similarly stored into the shown memory banks (202) and such banks could also be realized in form of any non-volatile memory types (i.e., ROM, EPROM, or Flash, etc.), if desired, without deviating much from these Spencer's suggestion. Furthermore, it is noted that Fig. 3 shows the use of a data buffer (302) "volatile" memory (302) as some type of "volatile" memory and the "data manager (304)" can also control the data transfer for the firmware stored in these memory banks into this volatile memory (buffer 302) for further execution and/or processing of the instructions/codes by the other control circuitry (3003, 306, or host). Lastly, Fig. 4 also shows the use of another data buffer (volatile memory 402) as temporary means for storing the firmware data, if any, transferred from the storage device interface (404) that is coupled to the memory banks (shown in Fig. 2).

Kumahara et al (see Fig. [1]) shows a non-volatile memory card (which includes a non-volatile memory array (Flash FMEM, read solution page), and a CPU acting as claimed "controller" for giving an instruction of operation on the basis of external command from external host. The solution further mentions the use of a RAM as volatile memory for holding the basic routine of firmware for controlling the memory card operation. Basically, it states that ".it is constituted so that a main routine or the like, ***which is part of the main routine, can be transferred to the RAM*** in the power supply or reset ***after writing it in a firm data area of***

the flash memory FMEM from an external host'. Thus, it would have been obvious to one skilled in this art that the arbitrary firmware can be selected and stored into the volatile RAM for further processing and/or execution of its codes if desired.

3. Other claims 2-5 contain allowable subject matter over prior arts of record but objected as being dpe3ndent upon their rejected base claim 1.
4. The references cited herein, **Hijikata et al (JP02002251595A)** and **Tanaka (JP363244231A)**, are related as they both show the use of firmware stored in the ROM of a memory card.
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Viet Q. Nguyen whose telephone number is (571) 272-1788. The examiner can normally be reached on 7am-6pm (EST).
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoai Ho can be reached on (571) 272-1777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Viet Q Nguyen
Primary Examiner
Art Unit 2827

vn
V. Nguyen
5/2/2005

V. Nguyen